Arborist Report

March 2009

Karen Christman, Certified Arborist (Certified Arborist #WE3807A)
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For **Peikert Group Architects**, 10 E. Figueroa Street, Suite 1, Santa Barbara, CA 93101 805 963-8283

BACKGROUND/SUMMARY

Lisa Plowman, Project Manager with Peikert Group Architects (PGA) met with Certified Arborist, Karen Christman of Arbor Services in November 2008 to discuss the preparation of an Arborist Report for 1820, 1822, and 1826 De La Vina Street, Santa Barbara, California (Figure 1).

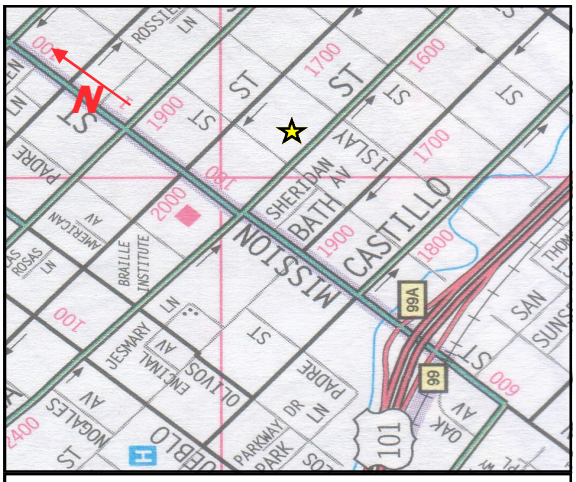


Figure 1: M-Group Development, LLC development project on 1820-1826 De La Vina Street, Santa Barbara, CA. (Christman, 2008)

The proposed development by M-Group Development, LLC includes the demolition of five existing structures located at 1820, 1822, and 1826 De La Vina Street and the construction of fourteen residential units with a subterranean parking garage (Appendix I). The only native tree on the site is a *Quercus agrifolia* located in the front yard setback. It has been incorporated into the landscape plan and will be preserved. The remaining trees are non-natives in fair to poor condition and are not recommended for preservation or relocation.

A Visual Tree Assessment (VTA) conducted in January 2009 by Certified Arborist, Karen Christman determined the tree to be in fair condition. Proposed development within the *Quercus agrifolia's* dripline includes a driveway to the north, patio space to the east, and a stairs with a walkway to the south that will impact more than 35% of the **Critical Root Zone** (CRZ). Development will have an adverse impact on the subject Oak, thus proactive measures were recommended to improve current tree health, in addition to the implementation of a **Tree Protection Plan** before, during, and after development.

ASSIGNMENT

The assignment for this Arborist Report included the following tasks:

1) Meet with Lisa Plowman, Planning Manager of Peikert Group Architects at project site located at 1826 De La Vina Street.

2) Prepare Arborist Report for *Quercus agrifolia* (Coastal Live Oak) located in front yard setback of 1826 De La Vina Street.

Testing and Analysis

Diameter at Breast Height (DBH) was measured at approximately 4.5 feet above ground level using a standard tape measure. General health was determined through a Visual Tree Assessment (VTA) based on the standards set forth by the International Society of Arboriculture (ISA). The Critical Rootzone for this report was based on the subject tree's dripline. A spade was utilized to observe soil and root crown conditions.

Limiting Factors of Assignment

A limited history of the subject tree was available. It was noted via email from Mark Maldonado, however, that Santa Barbara Pest Control had inspected the tree in October 2008 for Oak Moth and that fertilization and spraying was recommended for the spring. A rootzone disturbance history was unavailable.

OBSERVATIONS

The project site is located in a residential area of downtown Santa Barbara. The subject tree is a mature, native *Quercus agrifolia* located in the front yard setback which is elevated above street level (Figure 2). The west canopy overhangs a retaining wall, sidewalk and De La Vina Street. There are two *Podocarpus* street trees in the understory. Utility lines run along the west canopy. There is a walkway and stairs to the north and south of the tree. The residential unit to the east of the tree is occupied.

Figure 2: Southern view of *Quercus agrifolia* in front yard setback of 1826 De La Vina Street, Santa Barbara. Two Podocarpus street trees are in the west understory. (Christman, 2009)

Turf is the predominate groundcover within the CRZ. Algerian Ivy (*Hedera canariensis*) grows along the retaining wall. The soil was moist and semi-compact at the time of the VTA. No fruiting bodies were observed.

The subject Oak has three main trunks at approximately five feet above ground level (AGL). The DBH is approximately 46 inches. There is no trunk flare on the west side of the main trunk. Aged frass of a coarse consistency was detected in the crotch of the tree indicative of the Sycamore borer (*Synanthedon culciformis*), a non-threatening pest. The tree also has an Oak Moth (*Pyryganidia californica*) infestation. Throughout the trunks and on the ground are aged pupae casings from the pest.

The inner canopy has moderate **epicormic** growth and little to no internal branching as if **lion tailed** in previous pruning events. Foliage is sparse and concentrated on the branch ends, but new growth was emerging at the time of the VTA.

DISCUSSION\CONCLUSION

Based on the VTA, the *Quercus agrifolia* is in fair condition. The stripped out interior branching (possibly done to increase light penetration for the lawn area) has stimulated epicormic growth. Overthinning or lion tailing is a practice to be avoided due to its adverse effects on the tree (Lily, 2001). The excessive removal of the inner lateral branches has displaced branch weight to the ends. It also makes it strategically difficult to reduce crown size in the future since there are no laterals to cut back to. The canopy will ultimately need to be trimmed off the adjacent Podocarus street trees and utility lines.

The Oak Moth infestation has also contributed to the subject tree's sparse canopy. Oak Moth larvae feed on the foliage and commonly defoliate Oaks in our area. There can be up to four cycles per year. A healthy tree can sustain defoliation. Stressed trees, however, are often treated to prevent further decline.

The subject Oak's CRZ rootzone appears undisturbed with no symptoms such as foliar dieback to indicate previous rootzone disturbance or disease. Culturally, the turf within the CRZ does not favor optimum growing conditions for *Quercus agrifolia*. Oaks are susceptible to root and crown rot when the rootzone is constantly moist such as in irrigated turf. This native species requires little to no supplemental water.

The construction of a driveway at street level approximately 20 feet north of the main trunk will have significant impact on the CRZ (Appendix I). Up to 30% of the CRZ will be eliminated through excavation and further loss could be incurred through desiccation if the soil profile is left exposed during construction for an extended period of time.

The outdoor patio area off of unit #14 approximately 14 feet to the east and walkway approximately 10 feet to the south of the subject Oak will be less severe (15% to 25% root loss in CRZ), especially if hardscape design such as bridging and materials such as permeable pavers are utilized to minimize root damage and soil compaction. Large roots are essential for tree stability and storage. In construction, they are typically damaged from excavation and trenching. Fine roots are required for water and nutrient uptake. These finer roots are easily damaged from soil compaction inflicted from grading or heavy foot traffic. Root loss symptoms include, but are not limited to, foliar and branch dieback, instability, reduced vigor, greater susceptibility to disease and pests, and epicormic growth.

In conclusion, the proposed development will have an adverse effect the overall health of the *Quercus agrifolia,* a species with a documented intolerance to root loss. Preservation of this desirable specimen will require steps to improve current health and growing conditions, in addition to adhering to a Tree Protection Plan before, during, and after development. Failure to counter adverse effects may lead to tree decline, failure, and even death.

RECOMMENDATIONS

The following steps are recommended to ensure the long-term safety, health and beauty of the *Quercus agrifolia*:

1. Deep root aerate and fertilize Oak rootzone prior to construction to improve soil conditions and support healthy generation of new foliage and roots.

2. Mulch CRZ with 4 to 5 inches of wood chips (keep off tree base) to improve soil conditions and minimize future soil compaction.

3. Install temporary chain link fence (six feet tall) at edge or beyond the dripline prior to project commencement.

4. Incorporate hardscape design and materials that minimize rootzone compaction, disturbance, and promote gas-exchange and water percolation.

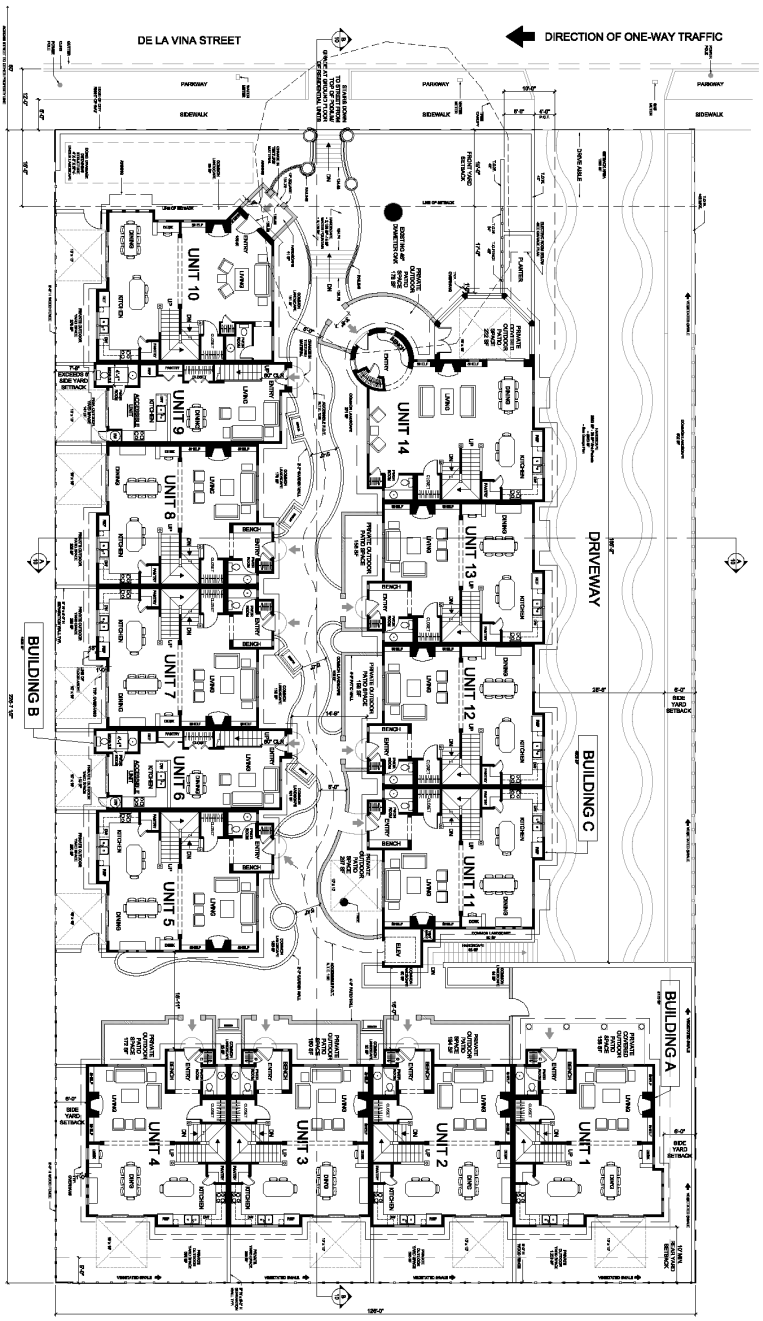
5. Exclude plantings within Oak dripline for a minimum of two years.

6. Contract with Consulting Arborist for biweekly inspections of tree during and after project commencement to provide guidance on tree health issues such as Oak Moth and rootzone conditions.

7. All future pruning shall be under the standards set forth by the ISA and supervised by a Certified Arborist. The object shall be to preserve as much foliage as possible.

8. Restrict all trenching within the CRZ of the subject Oak unless supervised by a Certified Arborist. Exposed soil profiles within CRZ shall be covered with moist burlap to prevent rootzone desiccation.

APPENDIX I: Site Plan for De La Vina Project



1820 - 1826 De La Vina

Santa Barbara, California

SITE PLAN / PODIUM LEVEL FLOOR PLAN

Site Plan / Podium Level Floor Plan

SCALE: 1/8" = 1'-0"

Peikert Group Architects, LLP.
10 East Figueroa Street, Santa Barbara CA 93013
p. 805.963.8283 f. 805.963.8184
www.peikertgroup.com

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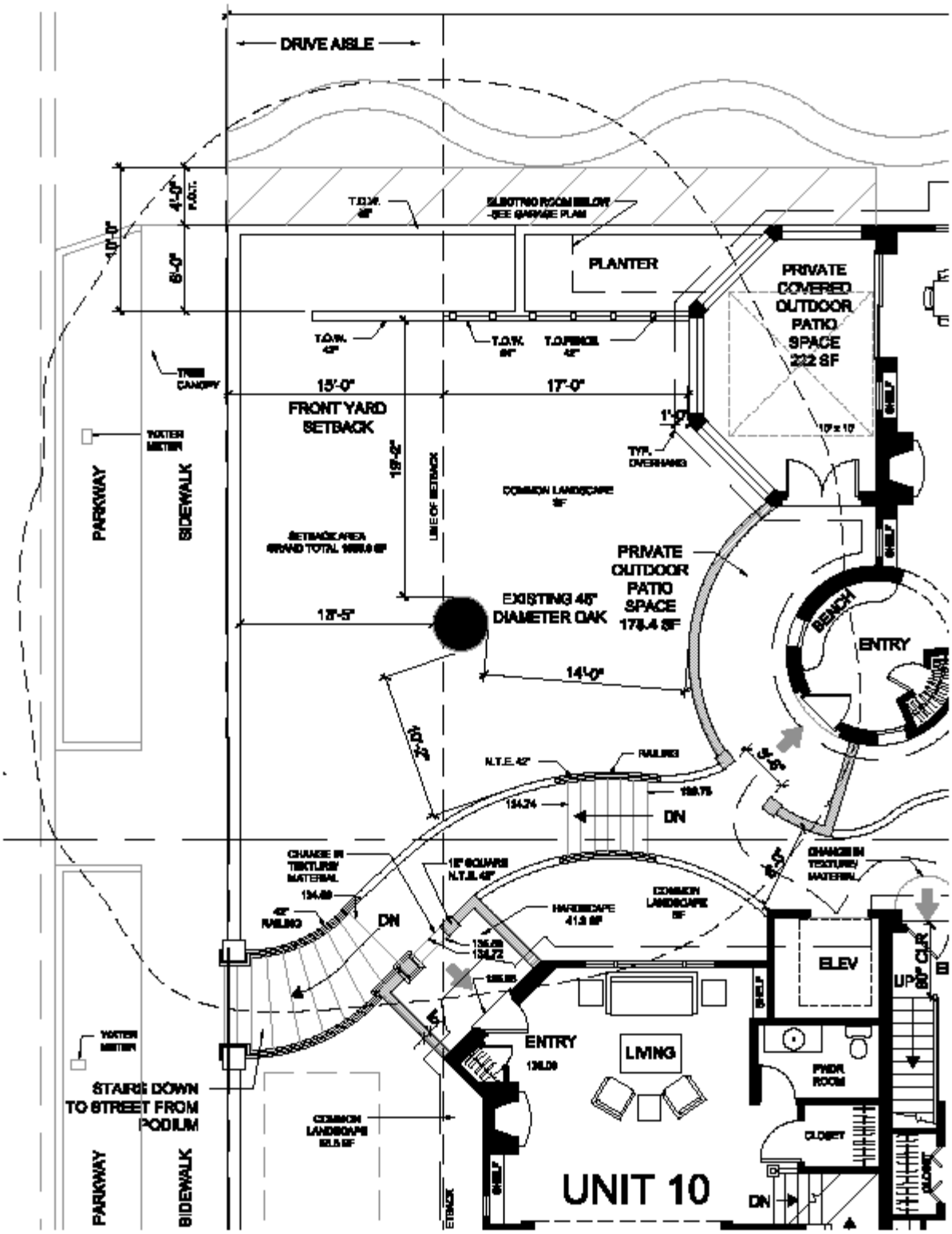
Dec. 1, 2008

APPENDIX III: Development Proposed within *Quercus agrifolia* CRZ



APPENDIX III: REFERENCES

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APPENDIX III: GLOSSARY (ISA, 2005)

Critical Root Zone—soil area around a tree where the roots are located that provides stability and a significant uptake of moisture.

Drip line—Imaginary boundary on the soil surface defined by branch spread of a single plant or group of plants.

Epicormic Growth—growth arising from a latent or adventitious bud (growth point)

Native or native species—plants indigenous to a region; naturally occurring and not introduced by man.

Mature—complete in natural development.

Oak Moth-- The California oakworm, *Phryganidia californica,* is one of many species of caterpillar that feed on oaks in California. Damage is most common on coast live oak, *Quercus agrifolia,* in the San Francisco Bay Area and Monterey Bay region with outbreaks occurring at about 8- to 10-year intervals; however, outbreaks can occur in many parts of the state. (UC-IPM, 2008)

Lion Tailing—poor pruning practice in which excessive number of branches are thinned from the inside (lower part) of lower limbs into a clump of terminal foliage.

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance health and beauty of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within the trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

ARBOR SERVICES
YOUR HANDS ON TREE EXPERTS

mastering the art and science of tree care

August 11, 2010

Mark & Valerie Maldonado
P.O. Box 30007
Santa Barbara, CA 93130-0007

RE: The Oak Cottage of Santa Barbara
1820,1822, 1826 De La Vina Street
Santa Barbara, CA

Dear Mark & Valerie:

The following is a revision to the March 2009 Arborist Report for 1820 – 1826 De La Vina Street in regards to the large *Quercus agrifolia* (Coastal Live Oak) located on the southwest side of the property. This report is based on changes in e site development plan as provided by Hochhauser Blatter Architecture and Planning and as discussed at our site meeting on August 10, 2010.

efinition of Assignment. The scope of development for the De La Vina Street site has been changed from a ourteen-unit residence with subterranean parking to a memory care community with ground level parking. The original arborist report, therefore must be revised to reflect these changes and how they will affect the subject Oak.

My assignment was in two parts:

1. Provide a current Visual Tree Assessment (VTA) of the subject tree.
2. Provide revisions to March 2009 Arborist Report to reflect Oak Cottage of Santa Barbara development plans.

Purpose of this report. The purpose of this report is to inform you of the results of my contracted assignment and provide updated recommendations for the preservation of the subject Oak. Refer to March 2009 Arborist Report for additional information.

Observations and Recommendations.

The subject Oak is in fair condition (Figure 1). Foliage density, especially epicormic growth has increased approximately 15% since my 2009 VTA. Oak Moth damage is minimal and appears to be at a low point in the cycle. Cultural conditions and understory landscape remains unchanged. Soil conditions also remained visibly unchanged.

Oak Cottage of Santa Barbara development includes the construction of a staircase and walkway within the southwest portion of the subject tree's dripline, approximately 17 feet from the main trunk. Approximately 10% to 15% of the CRZ ll be adversely affected by the excavation, grading and compaction required for this installation. A stone patio within e northeast CRZ will require minimal grading and compaction. Plants compatible to Oak understory have been called out for the landscaping under the tree with the bare soil areas to be mulched with wood chips. A fence to the far rtheast of the dripline will require only post-hole digging and affects less than 5% of the CRZ.

Conclusion.

The development of the The Oak Cottage of Santa Barbara will have less root zone intrusion and adverse impact on subject Oak than the Multi-unit development proposed in the 2009 Arborist Report. The construction of the staircase will have the greatest intrusion due to root loss from grade lowering. The walkway, fence, stone patio, and landscape installation will have minimal to moderate impact depending on the materials used and installation protocol followed within the work area. Although the tree's overall condition has slightly improved in the past year, protection measures must be adhered to before, during and after site development.

In addition to the following recommendations, the preparation of a Tree Protection Plan (TPP) by a Certified Arborist prior to job commencement is highly advisable. A TPP offers specific guidelines and serves as a communication tool in the construction process.

Recommendations.

1) Deep root aerate and fertilize Oak rootzone prior to construction to improve soil conditions and promote healthy generation of new foliage and roots. (Winter 2010) *This will be second application, first in 2009*

2) Mulch dripine with 4 to 5 inches of wood chips (keep off tree base) to improve soil conditions and minimize future soil compaction.

3) Install temporary chain link fence (six feet tall) at edge or beyond dripline prior to project commencement.

4) Designate tree dripline as a "no dump, wash or staging area" during construction.

5) Incorporate hardscape materials and design that minimize root compaction and promote water percolation and gas exchange.

6) Install Oak compatible plantings within the Oak dripline. Keep number minimal and use smaller pot sizes.

7) Contract with a Certified Arborist to inspect tree before, during and after development.

If you have any additional questions regarding this report, please contact me. I appreciate the opportunity to assist you with the project.

Sincerely,

Karen Christman,
Certified Arborist

Enclosures: invoice

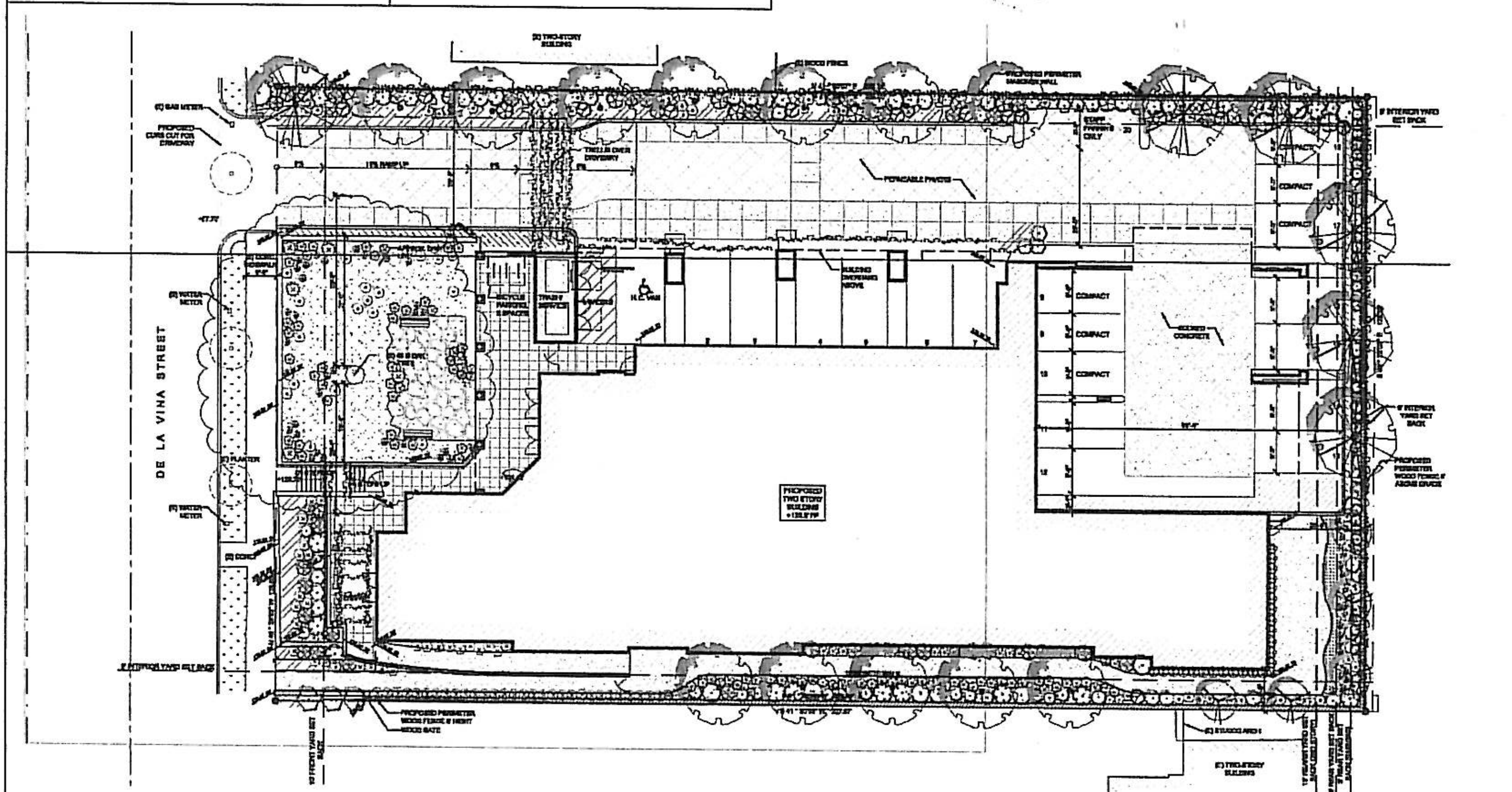
Figure 1: 1820 - 1826 De La Vina Street *Quercus agrifolia* southwest view. (Christman, 2010)

SITE GENERAL NOTES

1. COORDINATE WITH DEMO PLAN, SHEET A1.0, FOR LOCATION OF EXISTING SITE FEATURES TO BE REMOVED
2. COORDINATE WITH DEMO PLAN, SHEET A1.0, FOR INTERFACE WITH EXISTING STRUCTURES

SITE LEGEND

- NEW RETAINING WALL
- NEW BUILDING AREA
- NEW EXTERIOR CONCRETE PAD / PROPOSED WALKWAY
- TURF BLOCK PAVING SYSTEM
- NEW LANDSCAPE AREA



SITE PLAN

SCALE: 1" = 10'-0"

Hochhauser Blatter
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THE OAK COTTAGE OF SANTA BARBARA

1820, 1822, 1828 DE LA VINA STREET
APN #027-022-022, #027-022-023, #027-022-024
SANTA BARBARA, CA 93103

SHEET CONTENTS
SITE PLAN

SHEET
A1.1